

**ULTRASONIC DIAGNOSTIC IMAGING DEVICES  
WITH FUEL CELL ENERGY SOURCE**

**Abstract of the disclosure:**

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Ultrasonic diagnostic imaging devices are powered by fuel cells providing the continuous production of electrical energy by the direct electrochemical conversion of a hydrogen-based fuel into a flow of current. The ultrasound devices described comprise wireless transducer probes, handheld ultrasound systems, and cart-  
10 borne or tabletop ultrasound systems. The fuel for the fuel cells is contained in replaceable containers such as cartridges or ampules. When the fuel is exhausted, the fuel cells are immediately returned to a fully operating condition by replacing the expended unit with a full cartridge or ampule.